

# SENATE BILL 652

C5

(2lr1967)

## ENROLLED BILL

— Finance/Economic Matters —

Introduced by **Senators Middleton, Young, Garagiola, Manno, Mathias, and Rosapepe**

Read and Examined by Proofreaders:

\_\_\_\_\_  
Proofreader.

\_\_\_\_\_  
Proofreader.

Sealed with the Great Seal and presented to the Governor, for his approval this \_\_\_\_\_ day of \_\_\_\_\_ at \_\_\_\_\_ o'clock, \_\_\_\_\_ M.

\_\_\_\_\_  
President.

### CHAPTER \_\_\_\_\_

1 AN ACT concerning

2 **Renewable Energy Portfolio Standard – Renewable Energy**  
3 **Credits – Geothermal Heating and Cooling**

4 FOR the purpose of specifying that energy generated from a geothermal heating and  
5 cooling system is eligible for inclusion in meeting the renewable energy portfolio  
6 standard; entitling a certain person or entity to receive a renewable energy  
7 credit under certain circumstances; ~~specifying the method by which energy~~  
8 ~~generation and consumption shall be measured~~ specifying the methods by which  
9 the Commission shall determine the energy savings of geothermal heating and  
10 cooling systems; requiring geothermal heating and cooling system installation  
11 to comply with certain standards; *providing that energy generated from a*  
12 *geothermal Tier 1 renewable source is eligible for inclusion in meeting a certain*  
13 *standard only if the source is connected with the distribution grid serving*  
14 *Maryland*; defining a certain term; altering the definition of a certain term;

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#### EXPLANATION: CAPITALS INDICATE MATTER ADDED TO EXISTING LAW.

[Brackets] indicate matter deleted from existing law.

Underlining indicates amendments to bill.

~~Strike out~~ indicates matter stricken from the bill by amendment or deleted from the law by amendment.

*Italics* indicate opposite chamber/conference committee amendments.



1 providing for the application of this Act; and generally relating to geothermal  
2 heating and cooling systems.

3 BY repealing and reenacting, without amendments,  
4 Article – Public Utilities  
5 Section 7–701(a)  
6 Annotated Code of Maryland  
7 (2010 Replacement Volume and 2011 Supplement)

8 BY adding to  
9 Article – Public Utilities  
10 Section 7–701(c–1) and 7–704(h)  
11 Annotated Code of Maryland  
12 (2010 Replacement Volume and 2011 Supplement)

13 BY repealing and reenacting, with amendments,  
14 Article – Public Utilities  
15 Section 7–701(l) and 7–704(a)(2)(i)1.  
16 Annotated Code of Maryland  
17 (2010 Replacement Volume and 2011 Supplement)

18 SECTION 1. BE IT ENACTED BY THE GENERAL ASSEMBLY OF  
19 MARYLAND, That the Laws of Maryland read as follows:

20 **Article – Public Utilities**

21 7–701.

22 (a) In this subtitle the following words have the meanings indicated.

23 **(C–1) “GEOHERMAL HEATING AND COOLING SYSTEM” MEANS A SYSTEM**  
24 **THAT:**

25 **(1) EXCHANGES THERMAL ENERGY FROM GROUNDWATER OR A**  
26 **SHALLOW GROUND SOURCE TO GENERATE THERMAL ENERGY THROUGH A**  
27 **GEOHERMAL HEAT PUMP OR A SYSTEM OF GEOHERMAL HEAT PUMPS**  
28 **INTERCONNECTED WITH ANY GEOHERMAL EXTRACTION FACILITY THAT IS:**

29 **(I) A CLOSED LOOP OR A SERIES OF CLOSED LOOP SYSTEMS**  
30 **IN WHICH FLUID IS PERMANENTLY CONFINED WITHIN A PIPE OR TUBING AND**  
31 **DOES NOT COME IN CONTACT WITH THE OUTSIDE ENVIRONMENT; OR**

32 **(II) AN OPEN LOOP SYSTEM IN WHICH GROUND OR SURFACE**  
33 **WATER IS CIRCULATED IN AN ENVIRONMENTALLY SAFE MANNER DIRECTLY**  
34 **INTO THE FACILITY AND RETURNED TO THE SAME AQUIFER OR SURFACE WATER**  
35 **SOURCE;**

1           **(2) MEETS OR EXCEEDS THE CURRENT FEDERAL ENERGY STAR**  
2 **PRODUCT SPECIFICATION STANDARDS;**

3           **(3) REPLACES OR DISPLACES INEFFICIENT SPACE OR WATER**  
4 **HEATING SYSTEMS WHOSE PRIMARY FUEL IS ELECTRICITY OR A NONNATURAL**  
5 **GAS FUEL SOURCE;**

6           **(4) REPLACES OR DISPLACES INEFFICIENT SPACE COOLING**  
7 **SYSTEMS THAT DO NOT MEET FEDERAL ENERGY STAR PRODUCT**  
8 **SPECIFICATION STANDARDS;**

9           **(5) IS MANUFACTURED, INSTALLED, AND OPERATED IN**  
10 **ACCORDANCE WITH APPLICABLE GOVERNMENT AND INDUSTRY STANDARDS;**  
11 **AND**

12           **(6) DOES NOT FEED ELECTRICITY BACK TO THE GRID.**

13           (1) “Tier 1 renewable source” means one or more of the following types of  
14 energy sources:

15           (1) solar energy, including energy from photovoltaic technologies and  
16 solar water heating systems;

17           (2) wind;

18           (3) qualifying biomass;

19           (4) methane from the anaerobic decomposition of organic materials in  
20 a landfill or wastewater treatment plant;

21           (5) geothermal, **INCLUDING ENERGY GENERATED THROUGH**  
22 **GEOHERMAL EXCHANGE FROM OR THERMAL ENERGY AVOIDED BY,**  
23 **GROUNDWATER OR A SHALLOW GROUND SOURCE;**

24           (6) ocean, including energy from waves, tides, currents, and thermal  
25 differences;

26           (7) a fuel cell that produces electricity from a Tier 1 renewable source  
27 under item (3) or (4) of this subsection;

28           (8) a small hydroelectric power plant of less than 30 megawatts in  
29 capacity that is licensed or exempt from licensing by the Federal Energy Regulatory  
30 Commission;

1 (9) poultry litter-to-energy;

2 (10) waste-to-energy; and

3 (11) refuse-derived fuel.

4 7-704.

5 (a) (2) (i) 1. Except as provided in subsubparagraph 2 of this  
 6 subparagraph, energy from a Tier 1 renewable source under § 7-701(l)(1), (5), (9), (10),  
 7 or (11) of this subtitle is eligible for inclusion in meeting the renewable energy portfolio  
 8 standard only if the source is connected with the electric distribution grid serving  
 9 Maryland.

10 (H) (1) ENERGY FROM A GEOTHERMAL HEATING AND COOLING  
 11 SYSTEM IS ELIGIBLE FOR INCLUSION IN MEETING THE RENEWABLE ENERGY  
 12 PORTFOLIO STANDARD.

13 (2) A PERSON SHALL RECEIVE A RENEWABLE ENERGY CREDIT  
 14 EQUAL TO THE AMOUNT OF ENERGY, CONVERTED FROM BTUS TO  
 15 KILOWATT-HOURS, THAT IS GENERATED BY A GEOTHERMAL HEATING AND  
 16 COOLING SYSTEM FOR SPACE HEATING AND COOLING OR WATER HEATING IF  
 17 THE PERSON:

18 (I) OWNS AND OPERATES THE SYSTEM;

19 (II) LEASES AND OPERATES THE SYSTEM; OR

20 (III) CONTRACTS WITH A THIRD PARTY WHO OWNS AND  
 21 OPERATES THE SYSTEM.

22 ~~(3) THE TOTAL AMOUNT OF ENERGY GENERATED AND CONSUMED~~  
 23 ~~FOR A GEOTHERMAL HEATING AND COOLING SYSTEM SHALL BE MEASURED BY~~  
 24 ~~AN ONSITE METER FOR THE SYSTEM'S COEFFICIENT OF PERFORMANCE.~~

25 (3) TO DETERMINE THE ENERGY SAVINGS OF A GEOTHERMAL  
 26 HEATING AND COOLING SYSTEM FOR A RESIDENCE, THE COMMISSION SHALL:

27 (I) IDENTIFY AVAILABLE INTERNET-BASED ENERGY  
 28 CONSUMPTION CALCULATORS DEVELOPED BY THE GEOTHERMAL HEATING AND  
 29 COOLING INDUSTRY;

30 (II) COLLECT THE FOLLOWING DATA PROVIDED IN THE  
 31 RENEWABLE ENERGY CREDIT APPLICATION THAT:

1                   **1.    DESCRIBES THE NAME OF THE APPLICANT AND**  
2 **THE ADDRESS AT WHICH THE GEOTHERMAL HEATING AND COOLING SYSTEM IS**  
3 **INSTALLED; AND**

4                   **2.    PROVIDES THE ANNUAL BTU ENERGY SAVINGS**  
5 **ATTRIBUTABLE TO HOME HEATING, COOLING, AND WATER HEATING; AND**

6                   **(III) IN DETERMINING THE ANNUAL AMOUNT OF RENEWABLE**  
7 **ENERGY CREDITS AWARDED FOR THE GEOTHERMAL HEATING AND COOLING**  
8 **SYSTEM, CONVERT THE ANNUAL BTUS INTO ANNUAL MEGAWATT HOURS.**

9                   **(4)   TO DETERMINE THE ENERGY SAVINGS OF A NONRESIDENTIAL**  
10 **GEOTHERMAL HEATING AND COOLING SYSTEM, THE COMMISSION SHALL:**

11                   **(I)   USE THE GEOTHERMAL HEATING AND COOLING**  
12 **ENGINEERING TECHNICAL SYSTEM DESIGNS PROVIDED WITH THE RENEWABLE**  
13 **ENERGY CREDIT APPLICATION; AND**

14                   **(II)  IN DETERMINING THE ANNUAL AMOUNT OF RENEWABLE**  
15 **ENERGY CREDITS AWARDED FOR THE GEOTHERMAL HEATING AND COOLING**  
16 **SYSTEM, CONVERT THE ANNUAL BTUS INTO ANNUAL MEGAWATT HOURS.**

17                   **(4) (5)   A GEOTHERMAL HEATING AND COOLING SYSTEM SHALL**  
18 **BE INSTALLED IN ACCORDANCE WITH APPLICABLE STATE WELL CONSTRUCTION**  
19 **AND LOCAL BUILDING CODE STANDARDS.**

20                   SECTION 2. AND BE IT FURTHER ENACTED, That this Act shall apply only  
21 to geothermal heating and cooling systems that are commissioned on or after ~~July 1,~~  
22 ~~2012~~ January 1, 2013.

23                   SECTION 3. AND BE IT FURTHER ENACTED, That this Act shall take effect  
24 October 1, 2012.

Approved:

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Governor.

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President of the Senate.

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Speaker of the House of Delegates.